

ABSTRACT OF THE DISCLOSURE

A recombinant vector for expressing a heterologous peptide at the amino-terminus of a potyvirus coat protein. The vector includes sufficient potyvirus nucleic acid sequence to permit viral replication and spread within a plant infected by the vector. The vector further includes a heterologous nucleic acid sequence inserted at the amino-terminus of the potyvirus coat protein. Further disclosed are methods for transiently expressing the heterologous protein in a plant using the vector and plants transiently expressing the vector. Additionally, methods for vaccination which employ the vector to express an antigenic determinant in a plant are disclosed.